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Search History

(FILE 'HOME' ENTERED AT 09:34:38 ON 13 MAR 2006).

FILE 'HCAPLUS, INSPEC, JAPIO, USPATFULL, USPAT2, INPADOC' ENTERED AT
09:35:14 ON 13 MAR 2006

L1 544003 S (SINGLE OR MONO) (10A) (CRYSTAL?)
L2 34095 S (SUPERALLOY#)
L3 663364 S (HIGH? (4A) POWER# OR HIGH?) (8A) (ENERG?)
L4 7038 S (PREHEAT?) (8A) (MELT# OR LIQUID#)
L5 3406730 S (SOLID#)
L6 494583 S (FILLER#)

=> s l1 and l2 and l3 and l4 and l5 and l6

L7 1 L1 AND L2 AND L3 AND L4 AND L5 AND L6

=> d l7 abs,bib

L7 ANSWER 1 OF 1 USPATFULL on STN

AB Methods for repair of **single crystal**
superalloys by laser welding and products thereof have been
disclosed. The laser welding process may be hand held or automated.
Laser types include: CO.sub.2, Nd:YAG, diode and fiber lasers.
Parameters for operating the laser process are disclosed. **Filler**
materials, which may be either wire or powder **superalloys** are
used to weld at least one portion of a **single crystal**
superalloy substrate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2005:141214 USPATFULL

TI Methods for repair of **single crystal**
superalloys by laser welding and products thereof

IN Hu, Yiping, Greer, SC, UNITED STATES
Hehmann, William F., Greer, SC, UNITED STATES
Madhava, Murali, Gilbert, AZ, UNITED STATES

PI US 2005120941 A1 20050609

AI US 2003-728543 A1 20031204 (10)

DT Utility

FS APPLICATION

LREP Honeywell International Inc., 101 Columbia Rd., P. O. Box 2245,
Morristown, NJ, 07962-9806, US

CLMN Number of Claims: 33

ECL Exemplary Claim: 1

DRWN 3 Drawing Page(s)

LN.CNT 578

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Tit# Jiten J. Mlachak
 (603) 262-5355
 Fax# (603) 734-3888

44/728, 543

Examiner's Notes

1S (single or mono) (10a) (crystal?)
 1S (super alloy?)
 1S (high? low? power or high?) (8a) (energy?)
 1S (pre heat?) (8a) (melt?)
 1S (solid?)
 S (filler?)

11272 Rej:

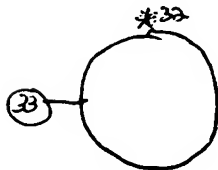
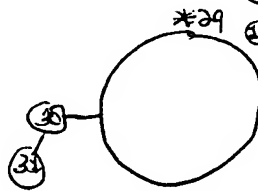
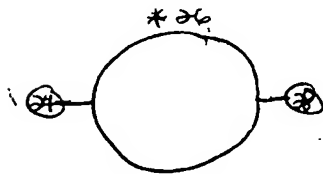
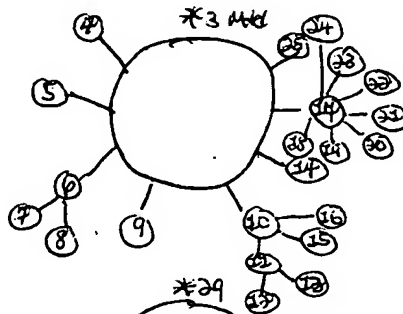
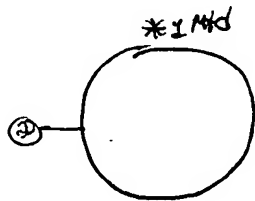
Claim 4, lines 6-7, "... RENE NS and N6..." (Trademark Cite)

Claim 6, lines 16-17, "... HASTELLOY X, INCO 743..." (Trademark Cite)

Claim 32, lines 15, 16, 22-23 "... SC 180, RENE NS ... MAR-M247..." (TRADEMARK CITE)

Allowable Subject Matter:

Claims 32 and 33 are allowed



1003 Rej:
 Claims 1-31

Search History

STN
(HEATW, JAPAC, USPTAU, INPADOC, INKPEC)
3/13/2006

=> d-18 1-4 abs, bib

L8 ANSWER 1 OF 4 USPTFULL on STN
AB Methods for repair of single crystal
superalloys by laser welding and products thereof have been
disclosed. The laser welding process may be hand held or automated.
Laser types include: CO.sub.2, Nd:YAG, diode and fiber lasers.
Parameters for operating the laser process are disclosed. Filler
materials, which may be either wire or powder superalloys are
used to weld at least one portion of a single crystal
superalloy substrate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2005:141214 USPTFULL
TI Methods for repair of single crystal
superalloys by laser welding and products thereof
IN Hu, Yiping, Greer, SC, UNITED STATES
Hermann, William F., Greer, SC, UNITED STATES
Madhava, Murali, Gilbert, AZ, UNITED STATES
PI US 2005120941 A1 20050609
AI US 2003-728543 A1 20031204 (10)
DT Utility
FS APPLICATION
LREP Honeywell International Inc., 101 Columbia Rd., P. O. Box 2245,
Morristown, NJ, 07962-9806, US
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 578

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 4 USPTFULL on STN
AB A thermally diluted exothermic reactor system is comprised of numerous
orifices distributed within a combustor by distributed perforated
contactor tubes or ducts. The perforated contactors deliver and mix
diluent fluid and one or more reactant fluids with an oxidant fluid.
Numerous micro-jets about the perforated tubes deliver, mix and control
the composition of reactant fluid, oxidant fluid and diluent fluid. The
reactor controls one or more of composition profiles, composition ratio
profiles and temperature profiles in one or more of the axial direction
and one or two transverse directions, reduces temperature gradients and
improves power, efficiency and emissions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2004:279779 USPTFULL
TI Trifluid reactor
IN Hagen, David L., Goshen, IN, UNITED STATES
Ginter, Gary, Chicago, IL, UNITED STATES
Goheen, Bill, Goshen, IN, UNITED STATES
McGuire, Allan, Elkhart, IN, UNITED STATES
Rankin, Janet, Shawano, WI, UNITED STATES
PI US 2004219079 A1 20041104
AI US 2004-763047 A1 20040122 (10)
PRAI US 2003-442096P 20030122 (60)
US 2003-442844P 20030124 (60)
DT Utility
FS APPLICATION
LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR,
IRVINE, CA, 92614
CLMN Number of Claims: 84
ECL Exemplary Claim: 1
DRWN 31 Drawing Page(s)
LN.CNT 11328

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 4 USPTFULL on STN
AB In a method of making a load-bearing article by spray casting a molten
metal onto a metal substrate, the substrate surface receiving the spray

cast deposit is treated by vacuum cleaning, boronizing and/or knurling to enhance the structural integrity of the diffusion bond joint subsequently formed between the spray cast deposit and the substrate in sustaining a load across the joint without premature joint failure.

AN 94:48406 USPATFULL
TI Method of enhancing bond joint structural integrity of spray cast article
IN Stinson, Jonathan S., Plymouth, MN, United States
Bowen, Kim E., Whitehall, MI, United States
PA Howmet Corporation, Greenwich, CT, United States (U.S. corporation)
PI US 5318217 19940607
AI US 1991-794320 19911114 (7)
RLI Continuation of Ser. No. US 1989-452958, filed on 19 Dec 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Nelson, Peter A.
LREP Flynn, Thiel, Boutell & Tanis
CLMN Number of Claims: 37
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1283

L8 ANSWER 4 OF 4 USPATFULL on STN
AB The invention consists of a method of producing a fine equiaxed grain structure (ASTM 2-4) in cast nickel-base **superalloys** which increases low cycle fatigue lives without detrimental effects on stress rupture properties to temperatures as high as 1800° F. These **superalloys** are variations of the basic nickel-chromium matrix, hardened by gamma prime [Ni.sub.3 (Al, Ti)] but with optional additions of cobalt, tungsten, molybdenum, vanadium, columbium, tantalum, boron, zirconium, carbon and hafnium. The invention grain refines these alloys to ASTM 2 to 4 increasing low cycle fatigue life by a factor of 2 to 5 (i.e. life of 700 hours would be increased to 1400 to 3500 hours for a given stress) as a result of the addition of 0.01% to 0.2% of a member of the group consisting of boron, zirconium and mixtures thereof to aid heterogeneous nucleation. The alloy is vacuum melted and heated to 250°-400° F. above the melting temperature, cooled to partial solidification, thus resulting in said heterogeneous nucleation and fine grains, then reheated and cast at about 50°-100° F. of superheat. Additions of 0.1% boron and 0.1% zirconium (optional) are the preferred nucleating agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 78:13981 USPATFULL
TI Method of improving fatigue life of cast nickel based **superalloys** and composition
IN Denzine, Allen F., Chardon, OH, United States
Kolakowski, Thomas A., Cleveland, OH, United States
Wallace, John F., Shaker Heights, OH, United States
PA University Patents, Inc., Stamford, CT, United States (U.S. corporation)
PI US 4078951 19780314
AI US 1976-672350 19760331 (5)
DT Utility
FS Granted
EXNAM Primary Examiner: Dean, R.
LREP Fay & Sharpe
CLMN Number of Claims: 16
ECL Exemplary Claim: 13
DRWN No Drawings
LN.CNT 1320

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L8 4 S L1 AND L2 AND L3 AND L4

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